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AUG 31 '79

CUTLER
CURRENT SERIAL RECORDS

AGRICULTURAL LIBRARIES INFORMATION NOTES



CUTLER OUTLINES RD POLICY

In a major policy speech on rural development, Assistant Secretary of Agriculture Rupert Cutler told an Arkansas audience "Rural development is a major USDA commitment. Rural conservation, research and extension are primary elements of that commitment. We are committed to providing rural Americans with more employment and investment opportunities and with higher and more equitable incomes. We are committed to conserving resources and abating pollution in rural communities—to improving the quality of life in rural America—and we are committed to the research that holds the key to this better life."

He noted a tripling of RD-related research projects in USDA and at colleges and universities between 1970 and 1976 and said that spending on Extension educational programs in nonfarm RD more than doubled between 1970 and 1977. "This represents not more government spending, but a redirection of funds from other areas," he said. "This is in keeping with President Carter's pledge to improve management, reduce overlapping and duplication of effort and provide better service to the American people," he continued.

He cited a number of examples of the kind of work Extension is doing in Arkansas and nationwide to "promote citizen participation and to enhance the ability of local communities to deal with their own problems—an 'essential process'."

Excerpt from *Community Rural Development Newsletter* March 1979.

RD GOALS CITED BY USDA OFFICIAL

John Leslie, Deputy Assistant Administrator for Rural Development Policy, Farmers' Home Administration, recently listed USDA rural development goals at a seminar sponsored by the Pennsylvania Rural Development Committee at Pennsylvania State University.

- Improve rural income levels and increase RD opportunities.
- Improve the access of rural residents to adequate housing and essential community facilities and services.

- Provide a more equitable distribution of opportunities through targeting efforts on distressed areas, communities and people.
- Create and implement a process for involving the private sector and local, State, and Federal agencies in establishing policies and programs that affect rural areas.
- Strengthen the planning, management, and decision-making capacity of public and private institutions concerned with economic opportunity and quality of life in rural America.

Excerpt from *Community Rural Development Newsletter* March 1979.

AGRICULTURAL BIBLIOGRAPHY AWARD

SCIENCE
AND
TECHNOLOGY
SECTION

ASSOCIATION
OF COLLEGE
AND RESEARCH
LIBRARIES
OF THE
AMERICAN
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ASSOCIATION

OBERLY AWARD CITATION FOR THE BEST BIBLIOGRAPHY

*Submitted in the field of the
Agricultural Sciences, 1977-1978
Awarded to*

James B. Beard

Harriet J. Beard

David P. Martin

*For Turfgrass:
Bibliography from 1672 to 1972*

The Oberly Award for Bibliography in Agriculture and the related sciences was presented to James B. Beard, Harriet J. Beard and David P. Martin for *Turfgrass: Bibliography from 1672 to 1972* at the American Library Association Annual Convention in Dallas, Texas, on June 27. The presentation took place during the program meeting of the Science and Technology Section of the Association of College and Research Libraries of the American Library Association.

The Award, presented in odd number years, is the only award currently administered by the Association of

College and Research Libraries. It is in the form of a hand-lettered citation and a check for \$100.



James Beard is currently Professor of the Soil and Crop Sciences, Texas A & M University, and has previously held academic appointments at Michigan State University and Purdue University. His undergraduate work was done at Ohio State University; he received his M.S. and Ph.D. degrees from Purdue University. Dr. Beard has held National Science Foundation fellowships at Purdue and at the University of California, Riverside Campus. He has provided leadership and coordination of the research program in stress physiology and culture of perennial grasses, has pioneered investigations concerning the metabolic basis of indirect heat stress, shade adaptation, wear tolerance, and thatch biodegradation.

Discovery of the spring root die-back phenomenon in C-4 grasses is of particular note. Other research emphases have been on the prevention of winter injury, ecology of grass communities, roadside establishment, and sod production. Dr. Beard is the author of 74 scientific journal papers and 196 popular technical articles.



Co-compiler is David P. Martin, Associate Professor and Extension Agronomist, Ohio State University. Dr. Martin received a B.A. degree from Goshen College and M.Sc. and Ph.D. degrees from Michigan State University. His current responsibilities include teaching turf courses, statewide extension leadership in turfgrass management and science, and research interests in nutrition, management, and weed control. He is the author or coauthor of five technical papers and numerous popular articles. ☺



Associated with Dr. Beard in the Award is his wife, Harriet J. Beard, for her work in editing and revising the bibliography.

The Oberly Award for Bibliography in the Agricultural and Related Sciences was established as memorial to Eunice Rockwood Oberly by her colleagues at the U.S. Department of Agriculture. Miss Oberly spent her entire professional career in the U.S. Department of Agriculture as librarian and bibliographer. In 1908, the Division of Vegetable Physiology and Pathology and the Office of Botanical Investigations were consolidated to form the Bureau of Plant Industry. Miss Oberly was appointed the Bureau Librarian, a position which she held until

her untimely death on November 5, 1921. Her highly specialized contributions to bibliography were devoted almost entirely to phytopathological subjects.

The Oberly Award has been presented in the odd-numbered years since 1925, with the exception of 1943, when it was omitted because of World War II, and in 1969, when a recipient was not selected. In 1979, the monetary award was supplemented by the Associates of the National Agricultural Library, Inc., in order that each recipient could receive a check for \$100.

The chairman of the 1979-80 Award Committee is John Beecher, Agricultural Library, University of Illinois, Champaign-Urbana, IL.

TOXICOLOGY ABSTRACTS AT NERAC

New England Research Application Center (NERAC) announces the addition of Toxicology Abstracts to its extensive list of data bases accessed in toxicologically related subject areas. Toxicology Abstracts covers over 5,000 international journals in 23 languages with the major emphasis on acute and chronic toxic effects.

Significant areas covered include the following:

1. Pharmaceuticals
2. Food Additives and Contaminants
3. Social Poisons and Drug Abuse
4. Nitrosamines
5. Radiation and Radioactive Materials
6. Toxicity Legislation
7. Agrochemicals
8. Toxicity Testing and Analytical Procedures
9. Natural (Plant and Animal) Toxins
10. Industrial Materials, Metals and Pollution

For a comprehensive access to the toxicological literature of the world, Toxicology Abstracts is especially useful when searched in conjunction with other applicable data bases such as Biological Abstracts, Chemical Abstracts Condensates, Pollution Abstracts, Food Science and Technology Abstracts, Pharmaceutical News Index, Government Report Abstracts, and Conference Papers Index.

* AUDIOVISUALS FROM GUELPH

The Office of Audio Visual Services at the University of Guelph is making a number of learning materials available to individuals and institutions. Included are:

An Introduction to the Poultry Industry. 59
2x2 color slides with audio cassette and notes. \$65.

An Introduction to Modern Poultry Management.
77 2x2 color slides with audio cassette and notes. \$85.

Stimulation of Feeding in Turkey Poults. 10
minute sound/color film. 16mm video-cassette.

If you are interested in receiving the free catalogue of learning materials, contact

Office for Educational Practice
University of Guelph
Guelph, Ontario, Canada N1G 2W1

UPDATE ON AGRIS

by

Carol A. Johnson, Chief
Analysis Section

National Agricultural Library, TIS/SEA/USDA

AGRIS (International Information System for the Agricultural Sciences and Technology) is a decentralized system which provides a worldwide current awareness service of bibliographic records by facilitating the exchange of information among all participating countries.

As one of more than 92 participants in the AGRIS system, the National Agricultural Library is responsible for information published in the United States, and has been contributing machine-readable records to this data base since its inception in 1975. During the first few years it was necessary for NAL to do double-coding and input of all citations added to AGRIS because of inconsistencies between its own record format (CAIN), and that used by AGRIS. This additional workload meant that the number of U.S. items added to AGRIS had to be limited to 12,000 per annum.


In the intervening years, closer liaison between the AGRIS coordinating center and NAL resulted in computer programs being written to provide machine conversion of records from CAIN to AGRIS. As a consequence, by the end of 1977 it was possible for NAL to discontinue separate coding and input for AGRIS. Concomitantly, more time and attention was given to improved coverage of U.S. publications, especially those of USDA.

This change-over has proven to be highly successful. Indeed, according to AGRIS data, 37 percent of the 132,067 citations published in AGRINDEX during 1978 represent U.S. input (48,989). This compares quite favorably (90% coverage) with the total number of U.S. citations made available online in the AGRICOLA file during 1978.

We are pleased at the strides made to date in the creation of the AGRIS data base, as well as the progress in developing cooperative efforts. Although some compatibility problems remain, especially in the area of subject category and commodity codes,

differences are being reviewed and analyzed with a view toward resolution by January 1980.

In the meantime, effective January 1979, the cataloging and indexing records prepared by NAL are being distributed in a MARC Communications Format. To further reduce differences in input between AGRIS and NAL, these records carry the AGRIS geographical codes, which will also provide better subject access to geographic areas. In addition, AGRIS rules of descriptive bibliographic entry are being applied for indexing records. These changes will be reflected in a new edition of the *AGRICOLA ONLINE USERS GUIDE* and Supplements.*

As we look toward the future, it is anticipated that other participating organizations will be able to provide increasingly comprehensive and timely coverage of information published in their respective countries. As this occurs, we will be able to benefit from the use of externally created records in disseminating agricultural information within the United States. 

* The *AGRICOLA Online Users Guide* is expected off the press July 23. Announcement of availability will be in a forthcoming issue of *ALIN*.

"Up Front With Computers." Special issue of *Journal of Extension* May/June 1979. \$2. Order from 605 Extension Building, 432 North Lake Street, Madison, Wisconsin 53706. "The theme of this issue lends itself to several interpretations: (1) we must be open and honest about how we use the computer in Extension, (2) we have an obligation to help our clientele learn how to effectively use the computer as a management tool, and (3) we need to set an example as effective users of the computer as an analytical, decision-making aid."

CAPITOL HILL LEGISLATION



GENERAL AGRICULTURE

H. R. 4387. Agriculture Appropriations 1980. Makes appropriations for Agriculture, Rural Development and Related Agencies Programs for Fiscal Year ending September 30, 1980. Reported in House, June 7, 1979 (*H. Rept. 96-242*); passed House, June 19, 1979; referred to Senate Appropriations Committee, June 21, 1979.

AQUACULTURE

H. R. 20. National Aquaculture Act of 1979. Provides for the development of aquaculture in the United States; reported in House, May 15, 1979 (*H. Rept. 96-198, pt. I*).

RURAL DEVELOPMENT

S. 985. To Amend the Consolidated Farm and Rural Development Act. Authorizing funds for Fiscal Years 1980 and 1981. Reported in Senate, May 15, 1979 (*S. Rept. 96-168*); passed Senate, May 23, 1979 (*H. Rept. 96-153*); supplemental report filed, June 7, 1979 (*H. Rept. 96-153, pt. II*).

S. 1064. Rural Housing Amendments of 1979. Amends and extends Title V of the Housing Act of 1949, provides authorization for an additional \$66.5 million to fund the Federal government rural housing grants programs. Extends for one year various rural housing loan authorizations of the Farmers' Home Administration. Includes provisions that would allow assistance for about 16,000 additional households under the rural homeowners assistance programs. Reported in Senate, May 15, 1979 (*S. Rept. 96-157*).

H. R. 3580. Rural Development Policy Act of 1979. Provides for establishment and coordination of rural development policy, and extends for two years the authorization of appropriations for carrying out Title V of the Rural Development Act of 1972. Authorizes and direct Federal departments and agencies with programs affecting rural development to assist the Secretary of Agriculture in carrying out his responsibilities under this Act. Reported in House, June 8, 1979 (*H. Rept. 96-259*). Companion bill *S. 670* reported in Senate, May 6, 1979; passed Senate, June 14, 1979.

WATER

S. 480. Water Resources Planning Act of 1979. Amended to authorize appropriations for Fiscal Years 1980-1981; reported in Senate, May 15, 1979; (*S. Rept. 96-160*).

FOOD AND NUTRITION

H. R. 4136. Amends the Child Nutrition Act of 1966, by striking out "and for each of the fiscal years ending September 30, 1979, and September 30, 1980" and inserting in lieu thereof "and for each succeeding fiscal year ending on or before September 30, 1982, also striking out "and the succeeding fiscal year" and inserting in lieu thereof "and for the three succeeding fiscal years" and to extend the authorization of appropriations contained in Section VII of such act. Reported in House, June 1, 1979 (*H. Rept. 96-229*).

H. R. 4057. Food Stamp Act Amendment of 1979. Amends section 18 of the Food Stamp Act of 1977 by deleting the figure \$6,158,900,000 and inserting in lieu thereof the figure of \$6,808,900,000. Bill reported in House, June 11, 1979 (*H. Rept. 96-264*).

(Continued on page 6)

(Continued from page 5)

H. R. 4303. To Amend the Food Stamp Act of 1977; eliminates certain restrictions on excess shelter expense deductions with respect to households which are composed entirely of persons who are age sixty or older, or who are recipients of benefits under Title XVI of the Social Security Act; allows deductions for certain medical and dental expenses in the computation of incomes for such households; reported in House, June 21, 1979 (H. Rept. 96-295); passed House, June 26, 1979.

H. R. 2727. Meat Import Act of 1979. Modifies the method of establishing quotas on the importation of certain meat, to include within such quotas certain meat products. Reported in House, June 6, 1979 (H. Rept. 96-238).



NEW SERIALS RECEIVED AT NAL



Animal Industry Today. Champaign, Ill., American Registry of Certified Animal Scientists. Vol. 1 - 1978—
SF1.A58

Beratungsservice: Tierproduktion. Wien, Bundesministerium für Land- und Forstwirtschaft. Vol. 1, T. 1 - 3 1978—
SF55.A9B4

Current Therapy. Philadelphia, W. B. Saunders. 1978—
RM101.087

Geomicrobiology Journal. New York, Crane, Russak. Vol. 1 - 1978—
QR1.G42

Handbooks of the Flora of Papua New Guinea. Carlton, Vic. Melbourne University Press. Vol. 1 - 1978—
QK366.H35

Nutrition in Health and Disease. New York, Raven Press. Vol. 1 - 1979—
RM216.N85

Nutritional Disorders. West Palm Beach, CRC Press, 1978—
RC620.A1N83

Topics in Hormone Chemistry. Chichester, Eng., E. Horwood Ltd. Vol. 1 - 1978—
QP571.T66

Toxic Substances Sourcebook. New York, Environment Information Center. Vol. 1 - 1978—
RA1190.T66

IKEBANA COLLECTION

In memory of its founder, Ellen Gordon Allen, the Washington, D.C. Chapter of *Ikebana International* recently presented to the National Agricultural Library, the Mary Cokely Wood Rare Book Collection on Japanese classical flower arrangement. Ultimately, this 53 book special collection, ranging in imprint dates from 1684 to 1954, will be housed in NAL's branch library at the National Arboretum.



Mrs. Paul Godley, former President 1971-1973, Dr. Richard A. Farley, Deputy Director, Technical Information Systems, Mrs. Laura Weir (daughter of Ellen Gordon Allen), Dr. Alan Fusonie, Historical and Preservation Program Specialist at NAL, and Mrs. Hale Talor, current President.

NEW PUBLICATIONS OF NOTE



A Century of Service. Raleigh, North Carolina Agricultural Research Service, North Carolina State University. Feb. 1979. A "special" publication--started as part of the NC SAES centennial celebration in 1977. Free. Order from NCARS.

Federal Government Printing and Publishing: Policy issues. Report of the Ad Hoc Advisory Committee on Revision of Title 44 to the Joint Committee on Printing, United States Congress, Washington, D.C., U.S. Government Printing Office, 1979. 120 p. [Committee Print]. Free. Request from the Joint Committee.

Food and Nutrition for the 1980's: Moving Ahead. Washington, D.C., 20250, Office of the Secretary, U.S. Department of Agriculture, April 1979. Free. Order from Office of the Secretary.

Comprehensive plan for implementing the National Food and Human Nutrition Research and Education and Information Programs.

Land Use Planning Report. weekly. Silver Spring, Md., Business Publications, Inc. Order from publisher, Box 1067 (301) 587-6300. \$125 per year.

An excellent source of information on pending and completed Federal legislation.

**Nutrient Requirements of Swine, Eighth Rev. Ed.* 1979 (*Nutrient Requirements of Domestic Animals Number 2*). Subcommittee on Swine Nutrition, Committee on Animal Nutrition, Board on Agriculture and Renewable Resources; Commission on Natural Resources, National Research Council (National Academy of Sciences, 1979; 61 pp.; ISBN 0-309-02870-1; \$3.75).

**Moisture and Frost-Related Soil Properties (Transportation Research Record 675).* Transportation Research Board; Commission on Sociotechnical Systems, National Research Council (Transportation Research Board, 1978; 43 pp.; ISBN 0-309-02815-9; \$3.60).

**Symposium on Perspectives on Food Safety.* Annual Meeting, Food and Nutrition Board, December 7, 1978. Food and Nutrition Board; Division of Biological Sciences, Assembly of Life Sciences, National Research Council (Food and Nutrition Board, 1979; 42 pp.; available from the board).

The METLAND Landscape Planning Process: Composite Landscape Assessment, Alternative Plan Formulation and Plan Evaluation; Part 3 of the Metropolitan Landscape Planning Model. Julius Gy. Fabos, Christopher M. Greene, and Spencer A. Joyner, Jr. Water Resources Research Center, Agricultural Experiment Station, University of Massachusetts at Amherst. Sept. 1978. Research Bulletin No. 653. Free. Order from WRRRC.

Summary of 7 years' work by a team of 40 people. A comprehensive approach to regional land use planning. Designed to show the potential cause-effect relationships of alternative land uses on various landscape, ecological and public service resources or primer concern in landscape planning.

Documents marked with an asterisk () are available from the Office of Publications, National Academy of Sciences, 201 Constitution Avenue N.W., Washington, D.C. 20418.

+Documents are available from other sources as noted. For documents shown as available from a specific unit of the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, or National Research Council, write to the listed unit at 2101 Constitution Avenue N.W., Washington, D.C. 20418. For Transportation Research Board documents unless otherwise noted, write to the Transportation Research Board, National Research Council, 2101 Constitution Avenue N.W., Washington, D.C. 20418.





The titles listed below are owned by the Library; those lacking call numbers have not yet been cataloged.
The foreign, as well as domestic titles are available from the Library through loan or photocopy.

An Annotated Bibliography on Vibratory Soil Dynamics: (1969-1979). James G. Hendrich. Auburn, AL, Science and Education Administration, USDA. 1979. 16 p. 199 citations. Free. Order from issuing agency.

Bibliography on the Economics of Fruit and Vegetable Production and Marketing (1965-1976). Joan, Pearrow. Washington, D.C., Economics, Statistics and Cooperatives Service, USDA. 1979. 112 p. 1,475 citations. (ESCS-50). Free. Order from issuing agency.

Current Bibliography of Agriculture in China. Wageningen, Netherlands, Center for Agricultural Publishing and Documentation (PUDOC). Vol. 1, 1979. ISSN 0165-1730. Order from Center. P.O. Box 4, 6700 AA. \$17.50 for remaining issues of Volume 1, published 1979.



Clearance has been granted to USDA authors to compile the following bibliographies:

Fire Effects Bibliography. Craig E. Chandler. For information contact: U.S. Forest Service, Forest Fire and Atmospheric Sciences Research, Room 606, Rosslyn Plaza, E-Building, Washington, D.C. 20013. (Telephone: 202-235-8195).

A Guide to the Literature on Aspergillosis as Caused on Aspergillus Fumigatus. P. B. Marsh. For information contact: Compiler, USDA, Agricultural Research Northeastern Region, Biological Waste Management and Organic Resources Laboratory, Agricultural Environmental Quality Institute, Beltsville, Md. 20705 (Telephone: FTS 344-3163).

Impact of Backcountry Recreationists on Wildlife. Catherine H. Ream. For information contact: Compiler, U.S. Forest Service, Intermountain Forest and Range Experiment Station, Forest Sciences Laboratory, Drawer G. Missoula, Montana 59806 (Telephone: FTS 585-3533).

Surface Environment and Mining Program Bibliography. Edward R. Browning. For information contact: Compiler, U.S. Forest Service, Surface Environment and Mining, 145 Grand Avenue, Billings, Montana 59101. (Telephone: FTS 585-6468).

QUICK BIBLIOGRAPHY SERIES

The bibliographies in this series are primarily computerized online or batch bibliographies emanating from searches performed by the TIS Reference Staff in response to customer requests.

Searches are selected for inclusion based on the currency of the topic, interest among clientele, relative length (approximately 150 citations or more) and probable value to a larger audience. All titles in this series will be listed for four months. Revisions or updates will be renumbered and reannounced. Only one copy of a title will be sent; however, requestors may make copies. To request a copy of a Quick Bibliography send the title, series number, and a return addressed label to:

Reference Division
Technical Information Systems, SEA, USDA
National Agricultural Library Building
Beltsville, MD 20705

NAL --- BIBL. --- 79-05. *Mulches, 1969-November 1978.* 303 citations from AGRICOLA. Search by Ruth Pyne. February 1979.

NAL --- BIBL. --- 79-06. *Consumer Issues, Problems, and Awareness, 1969-November 1978.* 217 citations from AGRICOLA. Search by David Hoyt. March 1979.

NAL --- BIBL. --- 79-07. *Water Pollution from Agricultural Lands, 1969-November 1978.* 227 citations from AGRICOLA. Search by David Hoyt. March 1979.

(Continued on page 9)

(Continued from page 8)

NAL -- BIBL. -- 79-08. *Aquatic Weeds, 1974 - September 1978*. 366 citations from AGRICOLA. Search by Jayne MacLean and Charles N. Bebee. March 1979.

NAL -- BIBL. -- 79-09. *Contagious Equine Metritis, 1972-1978*. 37 citations from AGRICOLA. Search by I. Jesse Ostroff. April 1979.

NAL -- BIBL. -- 79-10. *Herb Gardening, 1970 - 1978*. 112 citations from AGRICOLA. Search by Jayne MacLean and Ann Juneau. April 1979.

NAL -- BIBL. -- 79-11. *Floras of Asia, 1969-1978*. 182 citations from AGRICOLA. Search by Ann Juneau. April 1979.

NAL -- BIBL. -- 79-12. *Water Resource Allocation, 1968-1978*. 296 citations from AGRICOLA. Search by Jayne MacLean. April 1979.

NAL -- BIBL. -- 79-13. *Beekeeping and Apiculture, Monographs and Bibliographies, 1970-1978*. 114 citations from AGRICOLA. Search by David Hoyt. April 1979.

NAL--BIBL.--79-14. *Careers in Agriculture, 1970-November 1978*. 130 citations from AGRICOLA. Search by David Hoyt. April 1979.

NAL--BIBL.--79-15. *Ginseng, 1969-November 1978*. 125 citations from AGRICOLA. Search by Jerry Rafats. May 1979.

NAL--BIBL.--79-18. *Earthworms, Beneficial Effects, 1970-1978*. 179 citations from AGRICOLA. Search by Charles N. Bebee. May 1979.

NAL--BIBL.--79-19. *Jojoba, 1971-1978*. 73 citations from AGRICOLA. Search by Henry Gilbert. May 1979.

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AGRICULTURE, BIOLOGY & ENVIRONMENTAL SCIENCES**This Week's Citation Classic**CC/NUMBER 22
MAY 28, 1979

Glick B, Chang T S & Jaap R G. The bursa of Fabricius and antibody production. *Poultry Sci.* 35:224-5, 1955.
[Ohio Agricultural Experiment Station, Columbus, OH]

Removal of the bursa of Fabricius during its rapid growth period abrogated the ability of 89% of the birds to produce antibody to *Salmonella typhimurium*. Therefore, this paper suggests that the bursa, a lymphoepithelial structure, plays a role in the regulation of humoral immunity. [The *SCI*[®] indicates that this paper has been cited over 305 times since 1961.]

Bruce Glick
Poultry Science Department
Mississippi Agricultural &
Forestry Experiment Station
Mississippi State University
Mississippi State, MS 39762

March 8, 1978

"The selection of our bursa paper as a Citation Classic is an honor not only to the authors of this paper but also to the Land Grant System that made the research possible.

"I entered the doctorate program at Ohio State University because Dr. R. George Jaap, Poultry Science Geneticist, was willing to take a chance on a naive student. One cold evening in September, 1952, I observed Dr. Jaap remove from a goose an obscure gland which he identified as the bursa. My query, 'What is its function?' was answered, 'Good question, you find the answer.' In December, 1952, I initiated experiments which (among other things) demonstrated that the chicken's bursa grew most rapidly during the first three weeks after hatching. This observation convinced me that functional studies with the bursa would only be successful if the bursa were removed (bursectomy, BSX) within its rapid growth period. While the initial BSX experiments were interesting, they did not yield a dramatic role for the bursa. In the summer of 1954, T.S. Chang, a fellow graduate student, needed birds for the purpose of

developing antibody against *Salmonella*. The only birds available were mine. He injected several and to his surprise they failed to produce antibody. The wing band numbers revealed that I had bursectomized these birds. Obviously we were quite excited even though we did not recognize the true significance of our observation. We cooperated on several experiments which led to the paper in question. The paper was rejected by *Science* with the suggestion that '...further elucidation of the mechanism...should be attempted before publication.' Now, over twenty years later, we are just beginning to understand the mechanism."

"After leaving Ohio State University in 1955, I joined the Poultry Science Department at Mississippi State University and continued my studies of the bursa. The bursa has led my research into the specialties of endocrinology, neurophysiology, genetics, anatomy, and immunology. We have made many significant observations which were not a part of the original research. For example, in an experiment designed to define the immunological system I observed that male dysgammaglobulinemic chickens failed to mate if previously treated as embryos with testosterone propionate. The flexibility of the administration and administrators and the freedom from 'time and schedule' formats allowed us to further investigate this phenomenon which led to the concept of a critical period in the development of the chicken's hypothalamus.¹⁻³ The increased pressure on the researcher to abide by forms, schedules and other regulations could very well reduce the opportunity for chance discoveries such as the 'bursa' and 'critical period.' I look to the universities to supply the leadership which will encourage new and established researchers to follow their chance observations which lead to the progress of tomorrow."

1. Glick B. The reproductive performance of birds hatched from eggs dipped in male hormone solutions. *Poultry Sci.* 40:1408, 1961.
2. Wilson J & Glick B. Ontogeny of mating behavior in the chicken. *Amer. J. Physiol.* 218:951-5, 1970.
3. Crawford W C & Glick B. The function of the preoptic, mammillary lateralis and ruber nuclei in normal and sexually inactive male chickens. *Physiol. Behav.* 15:171-5, 1975.

AGRICULTURAL TRANSLATIONS



Technical Information Systems reviews titles before translations are made in order to avoid duplication within USDA. We also receive copies on deposit often far in advance of their listings in the standard bibliographic tools. This column is an alert to selected new receipts at TIS. These items are available to USDA personnel upon presentation of a loan request (AD-245) with the identification: TRANS. No. _____ along with the citation. Non-USDA persons may request photo-duplication at the rate of \$2 for each 10 pages or fraction thereof per citation. TRANS. No. _____ MUST be on the request. Both types of requests should be sent to:

Lending Division, Technical Information Systems
National Agricultural Library Building
U.S. Department of Agriculture
Beltsville, Maryland 20705

The Technical Translation Number will also be cited for those translations prepared for the U.S. Department of Agriculture and the National Science Foundation under the P.L. 480 program. Copies of these translations may also be ordered from the National Translation Center, John Crerar Library, 35 West 33rd Street, Chicago, IL 60616.

BAUER, K. et al. Investigations on the Epidemiological Significance of Animals Permanently Shedding the Foot-and-Mouth Disease Virus. Translated from German: *Berl. Munch. Tierarztl. Wochenschr.* V. 90 (1): 1-5. TRANS. No. 24375. TT 79-58029.

BURTSEV, V. I., I. M. Bondarenko, et al. About the Interaction of Vaccines in the Simultaneous Immunization of Swines. Translated from Russian: *Veterinariya*. 1:51-54. 1977. TRANS. No. 24352. TT 78-59202/6b.

GONCHARUK, E. I. et al. Use of a "Plant-Soil" Model for Standardization of Chemical Substances in the Soil. Translated from Russian: *Gigiena i Sanitariia*. 2:73-78. 1977. TRANS. No. 24250.

KOVRIKOV, I. T. Basic Form of Rotary Hoe Tines and Parameters of Working Tools for Surface Tillage Soils. Translated from Russian: *Traktory i Sel'khoz mashiny*. 7:22-24. 1978. TRANS. No. 24131.

LAVOILLE, B. et al. Study of the Amino Acid Composition of the Goat Milk. Translated from French: *Ann. Fals. Exp. Chim.* 69: (742) 535-543. 1976. TRANS. No. 24337. TT 78-59334.

RAKHMANIN, P. P. et al. Dynamics of Formation of Immunity in Sheep, Inoculated With Different Doses of Anti-Foot and Mouth Disease Vaccine From Lapinized Virus. Translated from Russian: *Veterinariya*. 1: 49-51. 1977. TRANS. No. 24451. TT 78-59202/6a.

RAKHMANIN, P. P. Specific Prophylaxis Against Foot and Mouth Disease. Translated from Russian: *Veterinariya*. 5: 59-61. 1976. TRANS. No. 24361.

SZENDRO, Z. A New Method for Evaluating Mother Rabbit's Milk Producing Capability. Translated from Hungarian: *Baromfitenyeszies es Feldolgozas*. 24: (1): 25-28. 1977. TRANS. No. 24407. TT 78-59404.

VINOKUROV, V. N. Influence of Wear of Plowshares on Draft Resistance. Translated from Russian: *Traktory i Sel'khoz mashiny*. 5:18-21. 1978. TRANS. No. 24164.

VYALKOVA, P. F. Digging Out Nursery Trees With A Vibrating Digger. Translated from Russian: *Lesnoe Khozyaistvo*. 1:69-71, 1977. TRANS. No. 24125.

AGRICULTURE DATEBOOK



October 2-4: GRAIN DUST-ITS CHARACTERISTICS, EXPLOSIBILITY, HAZARD CONTROL, AND UTILIZATION-WHERE WE ARE AND WHERE WE ARE GOING. Kansas State University. Contact Byron S. Miller, U.S. Grain Marketing Research Laboratory, 1515 College Ave., Manhattan, Kansas 66502 (913) 539-9141.

October 3-5: FIFTH INTERNATIONAL CONFERENCE ON VERY LARGE DATA BASES. Rio de Janeiro. Contact: Mr. R. J. Libero, IBM do Brasil, Caixa Postal, 1830-ZC-00, Rio de Janeiro-RJ-20.000, Brasil; or Professor Stanley Y.W. Su, Dept. of Computer and Information Sciences, Univ. of Florida, 512 Weil Hall, Gainesville, FL 32611.

October 14-18: SOCIETY OF AMERICAN FORESTERS 1979 CONVENTION. Boston, Mass. Gen. Inf.: E. F. Robie, SAF, 5400 Grosvenor Lane, Washington, D.C. 20014.

October 15-17: FORESTRY RESOURCES AND DEVELOPMENT IN THE AMERICA SYMPOSIUM. Sponsor: Interscencia Association, National Council of Scientific and Technological Research of Costa Rica, Association of the Scientific, Technological, and Engineering Community of Canada. Contact: Technical coordinators, Gerardo Budowski of CATIE, Turrialba, Costa Rica or Jack Hodgins, Domtar Inc., Senneville, Quebec, Canada, for further information.

October 22-26: NATIONAL AGRICULTURAL SCIENCE INFORMATION CONFERENCE. Iowa State University, Ames, Iowa. ESCOP-approved. Theme: "Popular Reporting of Agricultural Science: Strategies for Improvement." Open to scientists, research administrators, science communicators from USDA and extension and experiment station, and others interested in communication of science information. Contact: Dr. Mason E. Miller, Communication Scientist, USDA, SEA-Cooperative Research, Room 415-W, Washington, D.C. 20250 (telephone: 202-447-5059).

November 1979: INTERNATIONAL SYMPOSIUM ON THE STERILE INSECT TECHNIQUE AND THE USE OF RADIATION IN GENETIC INSECT CONTROL. Contact: John H. Kane, DOE, MS AI-5216, Washington, D.C. 20545 (COMM 301-353-3378)

Nov. 15-16: NATIONAL CONFERENCE ON SOIL CONSERVATION POLICIES. Washington, D.C. Contact: Soil Conservation Society of America, 7515 Northeast Ankeny Road, Ankeny, Iowa 50021.

November 25-29: ENTOMOLOGICAL SOCIETY OF AMERICA. ANNUAL MEETING. Denver, CO. Gen. Inf.: W. P. Murdoch, ESA, 4603 Calvert Road, College Park, MD 20740.

November 26-28: AGRICULTURAL INFORMATION CONFERENCE. Washington, D.C. To be held at the same hotel and concurrently with the annual meeting of the National Association of State Universities and Land-Grant Colleges. Contact: Wallace C. Olsen, Library Services, NAL/TIS/SEA/USDA, Beltsville, Md. 20705 (301) 344-3834.

1980

March 3-7: VIth International Association of Agricultural Librarians and Documentalists World Congress. Manila, Philippines. Contact: National Planning Committee, 6th IAALD World Congress, c/o The Library, University of the Philippines at Los Banos, College, Laguna 3720 Philippines

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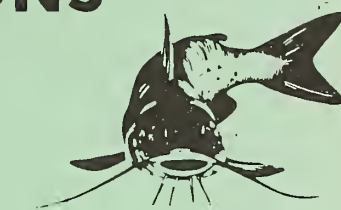
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A Joint Subcommittee on Aquaculture of the U.S. Departments of Agriculture and Commerce has completed translations of significant foreign literature pertaining to aquaculture. This interagency effort is an attempt to assist with the development of aquaculture in the United States. The translations were commercially done after a choice of the items to be translated was made by the Subcommittee. Persons working in this subject area with a need to have articles translated may contact Dr. Billy M. Teels, Soil Conservation Service, Rm. 6142, So. Agri. Bg., Washington, D.C. 20250 (301-447-4121) to learn the criteria for having translations made. Or, an article for translation may be submitted directly to Dr. Teels for consideration by the Joint Subcommittee.

This list represents translations done in the past two years; it was distributed previously in a different format to a limited number of aquaculture scientists. No attempt has been made to verify the bibliographic information supplied by the translator, such as the correct journal, report or conference title. Therefore, the original sources are often poorly identified.

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Advances in Research on the Causative Agent of Enteritis of Grass Carp.
Translated from Chinese: *Acta Hydrobiologica Sinica*. 6(2): 245-246, 1977.
TRANS. No. 24511.

Aquaculture Using Thermal Effluents. Translated from Japanese: *Minato Shimbin*.
No. 9001:1, July 2, 1977. TRANS. No. 23900.

CECCALDI, H.J. Note on the Ovogenesis of the Peneidae *Penaeus Kerathurus*.
Translated from French: *Report Com. Int. Mer. Medit.* 20(3):263, 1971.
TRANS. No. 24151.

- CECCALDI, H.J. General Aspects of Shrimp Farming. Translated from French: *Edut. Rev. CGPM*. 52:97-105. TRANS. No. 24093.
- CECCALDI, H.J. Evolution of Hemolymph Proteins of the *Penaeus Kerathurus* Female During Vitellogenesis. Translated from French: *Comptes Rendus des Seances de la Societe de Biologie et Ses Filiales*. 164(2):2572-2575. TRANS. No. 24146
- CECCALDI, H. J. et al. Comparison of Caroteno Lipoproteic Compositions in Amino Acids Derived from the Ovaries of Three Marine Crustaceans and one Mollusk. Translated from French: *Comptes Rendus des Seances de la Societe de Biologie et Ses Filiales*. 161. (5):1111-1113, 1967. TRANS. No. 24313.
- CUZON, G. and D. COGNIC. Influence of Heat Shocks on the Sloughing Rate of Shrimps *Penaeus Kerathurus*. Translated from French: *Comptes Rendus Seances de la Societe de Biologie et Ses Filiales*. 164(6):1275-1280, 1970. TRANS. No. 24083.
- CUZON, G. and H. J. CECCALDI. Evolution of Hemolymph Proteins in *Penaeus Kerathurus* During Starvation. Translated from French: *Tethys*. 3(2): 247-250, 1971-72. TRANS. No. 24307.
- DEVEZE, L., and Y. FAUVEL. Red Tide in Pond Ingril (Herault) A Bacterial Phenomenon. Translated from French: 10: 365-374. TRANS. No. 24294.
- Development of Techniques to Increase the Abalone Stocks in the Field. Translated from Japanese: *Annual Report, Kanagawa. Prefectural Fisheries Experimental Station*. No. 220(238) 1976. TRANS. No. 24289.
- DAH-SHU, L. The Method of Cultivation of Grass Carp, Black Carp, Silver Carp and Big Head Carp. Translated from Chinese. *Academica Sinica*, 1957. 90 p. SH 167.C3L44.
- FLASSCH, J.P. and E. WOITELLIER. Abalone Farming (*Haliotis Tuberculata* L.) Translated from French: *Scientific Department of the Oceanological Center in Brittany*. Issue No. 546. TRANS. No. 24252.
- FONTENELE, O. and A. J. N. DA SILVA. Simplification of the Artificial Incubative Floating Fish Eggs. Translated from Portuguese: *Boletim Tecnico, DNOCS, Fortaleza*. 33(1), January/June 1975. TRANS. No. 24473.
- FRANK, W. Histological Investigations in Case of *Carassius Auratus* L. (Pisces, Teleostei) Following a Severe Attack of *Trichodina Domerguei* Wallengreen, 1897 (Protozoa, Euciliata). Translated from German: *Zeitschrift fur Parasitenkunde*. 21: 446-456, 1962. TRANS. No. 2510.
- FRANK, W. Unusual Incidents of Death Caused by Amoebiasis in Case of *Hatteria* (*Spehnodon punctatus*), Young Green Turtles (*Chelonia mydas*) and a Spurious Loggerhead Turtle (*Caretta caretta*). Translated from German: *Salamandra* 12 (2): 94-102, 1976. TRANS. No. 24390.

- GUARY, J.C. et al. Seasonal Variations in the Composition of Fatty Acids of *Penaeus Japonicus* (Crustacea Decapoda). Translated from French: *Marine Biology*. 29: 335-341. TRANS. No. 24253.
- HATAI, K. Studies on the Fate of Intravascularly Injected Bacteria in Fish, Changes in Number of Cells of *Aeromonas Liquifaciens* in the Blood, Liver and Kidneys of the Eel. Translated from Japanese: *Gyobyo Kenkyu*. 7(1): 26-33, 1972. TRANS. No. 24251.
- HATAI, K. Studies on the Fate of Intravascularly Injected Bacteria in Fish-II. Changes in Number and Composition of Leucocytes in the Blood of the Eel Accompanying Changes in *Aeromonas* Bacteria. Translated from Japanese: *Gyobyo Kenkyu*. 7(1): 34-43, 1972. TRANS. No. 24398.
- HATAI, K. and S. EGUSA. Members of the Genus *Saprolegnia*, Associated with Fish Diseases, a Review. Translated from Japanese: *Gyobyo Kenkyu*. No. 11(1): 45-56, 1976. TRANS. No. 24438.
- HO, K. Research on Artificial Reproduction of Eels. (*Anguilla japonica*). Luh-kang Branch, Taiwan Provincial Fishery Research Institute. 17 p. Translated from Chinese. TRANS. No. 24310.
- INOUE, M. Abalone Fry Release and its Effectiveness. Managawa Prefecture Fisheries Experiment Station. 32 p. Translated from Japanese. TRANS. No. 24270.
- JENG, S.S. Recent Status of Cultured Shellfishes in Taiwan and the Phenomenon of Mass Morality. Translated from Chinese: *JCRR Fisheries Series*. No. 18: 3-6. 1975. TRANS. No.
- KARITANI, S.; S. Nakamura, and C. Matsudiarra. The Scotochromogens-Yellow-High Temperature Type of *Mycobacteria* Isolated from *Crassostrea*. Translated from Japanese: *Gyobyo Kenkyu*. 4(1): 11-18, 1969. TRANS. No. 24397.
- KLAPPER, H. Artificial Deep-Water Aeration and its Influence on the Metabolism of a River Dam Rich in Nutrients. Translated from German: *Limnologica*. 2(10): 607-616, 1976. TRANS. No. 24535.
- KO, T.C. Preliminary Report on American Eel (*Anguilla Rostrata*) Culture Experiment. 12 p. Translated from Chinese. TRANS. No. 24293.
- KUNISAKI, N., H. Matsuura and M. Hayashi. A Food-Hygienical Study on the Formation of N-Nitrosodimethylamine from Trimethylamine-N-Oxide and Nitrate. Translated from Japanese: *Bulletin, Japanese Society of Scientific Fisheries*. 43(11): 1287-1292, 1977. TRANS. No. 24084.
- KUSADA, R. et al. Studies on the Serous Ascites of Cultured Eel-II. On the Blood Properties of the Disease. Translated from Japanese: *Gyobyo Kenkyu*. vol. 7 (1) 44-50, 1972. TRANS. No. 24385.

- LAUBIER-BONICHON, A., and L. LAUBIER. Controlled Reproduction of the Shrimp, *Penaeus Japonicus*. Translated from French: *Contribution No. 424, the Scientific Department, Oceanologic Center of Brittany*. 12 p. 1976. TRANS. No. 24268.
- LE BORGNE, Y. The SATMAR Hatchery-Nursery and the Actual Possibilities for Producing Bivalve Mollusk Spat. Translation from French: *Actes de Colloques du CNEOX*. 4:353-360, 1977. TRANS. No. 24304.
- LE GALL, J.Y. and X. BARD. Aquaculture of Bluefin Tuna. Translated from French: *La Pêche Maritime*, June 20, 1978: 333-337. TRANS. No. 24537.
- LE PENNEC, M., and D. PRIEUR. Larval Development of *Mytilus edulis* (L) in the Presence of Antibiotics. Part I. Determination of Effectiveness and Non-Toxic Concentrations of Four Antibiotics: Aureomycin, Erythromycin, Chloramphenicol, and Sulfamerazine. Translated from French: *Rev. Int. Oceanogr. Méd.* 28: 167-180. 1972. TRANS. No. 24309.
- LERCHE, W. Research About the Development and Propagation of the Genus *Dunaliella*. Translated from German: *Kaiser-Wilhelm Institute for Biology*. 34: 236-268. TRANS. No. 24149.
- LIEDER, U., K. ANWAND, H. MARTINKOWITZ, C. HELMS and M. HILLENBRAND. Technology Improvement in the Industrial Eel Production by Means of a Dry Mixed Fodder for the First Stage. Translated from German: *Zeitschrift für die Binnenfischerei DDR*. 24(8): 236-239. 1977. TRANS. No. 24453.
- LIRA, E.R., and A.B. DA SILVA. Economic and Biological Studies Concerning Intensive Fishculture of the Hybrid, *Tilapia Nilotica* and *Tilapia*. Translated from Portuguese: *Boletim Técnico, DNOCS, Fortaleza*. 33(2) July/December 1975. TRANS. No. 24387.
- LUCAS, A., and D. PRIEUR. Bacteria Control of Bivalve Larval Cultures. Translated from French: *Conference on Aquaculture, Brest, October 1973, Conference Records*. No. 1:11-23, 1974. TRANS. No. 23898.
- LUCAS, A.M. LE PENNEC, D. PRIEUR and S. LE ROUX. Experimental Forms of Larvae of Marine Mollusks. Translated from French: *Laboratoire de Zoologie, Aquaculture et Pollutions Marines. Brest, France*. 1966. 20 p. TRANS. No. 24306.
- LUCAS, A. Hatcheries of Bivalve Mollusks. Translated from French: *Haliotis*. 5:14-34. 1975. TRANS. No. 24308.
- Marine Aquaculture Data Book. Translated from Japanese. I. Abalone Section. TRANS. No. 24435. Compiled under the Direction of Inshore Fishing Grounds Development and Planning Office, National Federation of Fisheries Cooperatives. Suisan Shappan (Ltd.) 1976.

- MATSUI, I. The Theory and Practice of Eel Cultivation, a Guide to Pond Culture of the Eel. Translated from Japanese: *Suisan Zoshoku Sosho* 4. 157 p. QL637.9.A5M32.
- MATSUSHITA, T. Fish Disease Diagnosis Guidelines. 1. Fisheries Agency. 94 p. Translated from Japanese. TRANS. No. 24273.
- MATSUZATO T., T. HOSHINA, K. Y. ARAKAWA, and K. MASUMURA. Studies on the So-Called Abnormal Egg-Mass of Japanese Oyster, *Crassostrea Gigas*. (Thurnberg)-Translated from Japanese: *Bulletin, Hiroshima Fisheries Experimental Station*. No. 8, March 1977. TRANS. NO. 24256.
- MELO, H.A.R DE and J.J.S. GURGEL. Toxicity of Bayluscide for Fresh Water Fish and Mollusks. Translated from Portuguese: *Boletim Tecnico, DNOCS, Fortaleza*. 34(1), January/June 1976. TRANS. No. 24389.
- MIHARA, T. Artificial Propagation of Salmon in Japan. Translated from Japanese: *Mariculture Series* 5. Japan Fisheries Resources Conservation Association. TRANS. No. 24311.
- NAEGEL, L. Recycling Systems in Aquaculture. Translated from German: *Allgemeine Fischwirtschafts-Zeitung*, 4:175-182, February 26, 1979. TRANS. No. 24538.
- NAKAJIMA, K. and E. SHUZO. Experiments on Chemical Control of Mud Snails. Translated from Japanese: *Gyobyō Kenkyū*. 10(1):84-89. TRANS. No. 24437.
- Observations on the Maturation and Reproduction of a Penaeid Shrimp in Captivity in a Tropical Medium. Translated from French. Presented at Aquaculture Workshop, ICES, May 10-13, Brest, France. 1976?, 34 p.
- OKA, H., T. MOTONOBU and H. HASEGAWA. Studies on the Artificial Maturation of the Japanese Eel *Anguilla Japonica* (I); On the Increase of Body Weight in the Female During the Course of Experiments. Translated from Japanese: *Bulletin, Shizuoka Prefectural Fish Experimental Station* (9): 27-37. TRANS. No. 24094.
- OSHIMA, Y. Studies of the Productive Effectiveness of Pawn Stocking. Translated from Japanese: *Seto Inland Fisheries Aquaculture Society Corporation*. No. 123. 1974. TRANS. No. 24434.
- PERESTENKO, L.P. News Concerning the Taxonomy of Nonvascular Plants: Rhodophyta of the Far Eastern Seas of the USSR. Translated from Russian: *Novosti Sistematiki Nizshikh Rasteniy*. 13: 39-50, 1976. Leningrad, Nauka Press, 1978.
- Pharmaceutical Treatment on Myxobacterial Gill Rot and White Head-Mouth Disease of Grass Carp. Translated from Chinese: *Acta Hydrobiologia Sinica*. 6(2): 243-244, 1977. TRANS. No. 24290.

- Recent Status of Cultured Shellfishes in Taiwan and the Phenomenon of Mass Mortality. Translated from Chinese: *Joint Commission of Rural Reconstruction. Taipei, Taiwan, China. JCRR Fisheries Series. No. 18:3-6. TRANS. No. 24474.*
- RHEINHEIMER, G. Microbiological Investigations in Rivers. I. Fluorescent Microscopical Analysis of the Bacterial Flora in Several Rivers of North Germany. Translated from German: *Arch. Hydrobiol.* '81(1): 106-118. TRANS. No. 24291.
- RUINEN, J. Notes About Saline Flagellates. II. About the Propagation of Saline Flagellates. Translated from German. Leiden, 19--. *Botanical Institute.* 210-258 p. TRANS. No. 24269.
- RYCKAERT, M. Effect of Ablation of the Eyestalks in Long and Short Photophase on the Development of the Gonads of Palaemon Serratus Pennant. Translated from French: *Comptes Rendus des Seances de la Societe de Biologie et ses Filiales.* 168:1364-1368, 1974. TRANS. No. 24147.
- RYCKAERT, M. Shifts in the Soluable Proteins of the Eggs of Processa Edulir Edulis (Crustacea Decapoda) During Embryogenesis. Translated from French: *Comptes Rendus des Seances de la Societe de Biologie et Ses Filiales.* 168(4-5):561, 1974. TRANS. No. 24148.
- SASAKAWA, Y. Studies on Blue King Crab Resources in the Western Bering Sea. Translated from Japanese: *Bulletin of the Japanese Society of Scientific Fisheries.* 39(10): 1031-1037, 1973. TRANS. No. 24388.
- SEKI, T. and H. KANNO. Synchronized Control of Early Life in the Abalone, Haliois Discus Hannai Ino, Haliotidae, Gastropoda. Translated from Japanese: *Tohokoku Suisan Kenkyujo Kenkyu Hokoku.* 38:143-153, 1977. TRANS. No. 24080.
- SERGEYEV, YU. S. The Ecological Effectiveness of Fish Culture. Translated from Russian: *Rybnoye Khozyaystvo.* 53(1):20-23, 1977. TRANS. No. 24248.
- SHIGIN, A.A. Metacercaria of the Genus Diplostomum, Fauna of the USSR. Translated from Russian: *Parazitologia.* 4: 346-357, 1976. TRANS. No. 24404.
- SHIMBUN, M. Aquaculture Using Thermal Effluents; Success on Commercial Basis. Translated from Japanese: *Minato Shimbun.* No. 90001:1, July 2, 1977. TRANS. No. 23900.
- SHIMMA, Y., and H. SHIMMA. Utilization of Petroleum Yeast in Fish Feed - IV. Plasma Cholesterol Content and Fatty Acid Composition of Erythrocytes of Rainbow Trout. Translated from Japanese: *Bulletin of Freshwater Fisheries Research Laboratory.* 24(1): 47-56. TRANS. No. 24141.
- SHINMA, Y. Utilization of Petroleum Yeast in Fish Feed-III. Long-term Feeding Tests on Rainbow Trout at 9.5°C and 17°C. Translated from Japanese: *Bulletin of Freshwater Fisheries Research Laboratory.* 45-57, 1976. TRANS. No. 24095.

- SHINMA, Y. Changes in Lipids in Maturing Rainbow Trout Due to Starvation. Translated from Japanese: *Bulletin of the Japanese Society of Scientific Fisheries*. 42 (1):83-89, 1976. TRANS. No. 23903.
- SHINMA, Y. Utilization of Petroleum Yeast for Fish Feed II. Effects on Growth and Lipids of Rainbow Trout Fingerlings Reared in Small Crawls. Translated from Japanese: *Bulletin of the Freshwater Fisheries Research Laboratory*. 24(2): 111-119. TRANS. No. 24439.
- SHINMA, Y. Utilization of Petroleum Yeast for Fish Feed, I. Effects of Supplemental Oils. Translated from Japanese: *Bulletin of the Freshwater Fisheries Research Laboratory*. 24(1), 47-56. August 1974. TRANS. No. 23902.
- SILVA, A. B. da. Preliminary Observations Regarding the Consorted Culture of Hybrid Fish from Tilapia Hornorum (Male) and Tilapia Nilotica (Female) with Mirror Carp, Cyprinus Carpio Vr. Specularis in a Breeder. Translated from Portuguese: *Boletim Tecnico, DNOCS, Fortaleza*. 33(1), January/June 1975. TRANS. No. 24386.
- STARUSHENKO, L. I. The Results of Acclimatizing the Far Eastern Mullet Mugil So-Iuy in the Black Sea. Translated from Russian: *Rybnoye Khozyaystvo*. 53(1): 26-28, 1977. TRANS. No. 24436.
- STEFFENS, W. and U. SEIDLITZ. Hungarian Experiments in Breeding and Rearing Carp. (Cyprinus carpio) Translated from German: *Zeitschrift fur die Binnenfischerei der DDR*. 24(4):111-117, 1977. TRANS. No. 24305.
- Studies on the Gill Disease of Grass Carp (Ctenopharyngodon Idellus): Isolation of Bacterial Pathogens. Translated from Japanese: *Acta Hydrobiologica Sinica*. 5(3): 315-334, 1975. TRANS. No. 24440.
- SUASTEGUI, J.M.M. Experiments with Cultures of Photosynthesizing Flagellates. Translated from Spanish: *Minutes of Second Symposium of the Latin American Aquaculture Society, Mexico, D.F.*, Nov. 13-15, 1978. TRANS. No. 24536.
- SUGIMOTO, Y. et al. Induced Maturation of Female Japanese Eels (Angiella Japonica) By Administration of Salmon Pitiutaries with Notes on Changes of Oil Droplets in Eggs of Matured Eels. Translated from Japanese: *Bulletin of the Faculty of Fisheries, Hokkaido University*. 27(3/4): 107-120. TRANS. No. 24097.
- TANIDA, S. Aquaculture in the Sea of Japan. Translated from Japanese: *Mariculture Series #25*. 224 p. TRANS. No. 24433.
- TAKEI, M., and S. ISHII. Preference of Eels in Artificial Diets. Translated from Japanese: *Tokai Suikenkyu Hokoku*. No. 65, February 1971. TRANS. No. 24068.
- TAKUNAGA, T. Studies on the Development of Dimethylamine and Formaldehyde in Alaska Pollack Muscle During Frozen Storage-II. Translated from Japanese: *Bulletin, Hokkaido Regional Fish Research Laboratory*. 30:90-97, 1965. TRANS. No. 24088.

- TAKUNAGA, T. Studies on the Development of Diamethylamine and Formaldehyde in Alaska Pollack Muscle During Frozen Storage. Translated from Japanese: *Bulletin, Hokkaido Reg. Fish. Res. Inst.* 29: 108-122, 1964. TRANS. No. 24086.
- TOMIOKA, K., J. OGUSHI and K. ENDO. Studies on the Dimethylamine in Foods (II) Enzymic Formation of the Dimethylamine from Trimethylamine Oxide. Translated from Japanese: *Bulletin of the Japanese Society of Scientific Fisheries.* 40(10): 1,021-1,026, 1974. TRANS. No. 24082.
- UCHIDA, I. Growth of the Loggerhead Turtle. Translated from Japanese: *Bulletin of the Japanese Society of Scientific Fisheries.* 33 (6): 497-506. TRANS. No. 23901.
- UKI, N. Oxygen Consumption of the Abalone *Haliotis Discus Hannai*, in Relation to Body Size and Temperature. Translated from Japanese: *Bulletin, Tohoku Regional Fisheries Research Laboratory.* No. 35, December 1975. TRANS. No. 24096.
- UKI, N., and S. KIKUCHI. On the Effects of the Irradiated Sea Water with Ultraviolet Rays on Inducing Spawning of the Scallop *Patinopecten Yessoensis* (JAY). Translated from Japanese: *Bulletin, Tohoku Regional Fisheries Research Laboratory.* No. 35, December 1975. TRANS. No. 24087.
- WADA, K. Growth of Japanese Pearl Oyster Larvae Fed with Three Species of Micro-Algae. Translated from Japanese: *Kokuritsu Shinju Kenkyuyo Hokoku.* 17: 2075-2083, 1973. TRANS. No. 24391.
- WORMHOUDT, A. Van. Activity of Digestive Enzymes During Vitellogenesis in *Palaemon Serratus*. Translated from French: *Comptes Rendus des Seances de la Societe de Biologie et de ses Filiales.* 167(5):679-, 1973. TRANS. No. 24150.
- WORMHOUDT, A. Van. Variation of Proteases, Amylases and Soluble Proteins During the Larval Development of *Palaemon Serratus*. Translated from French: *Marine Biology.* 19:245-248, 1973. TRANS. No. 24092.
- YAMANAKA, H.; T. KIKUCHI and K. AMANO. Studies on the Residue of Sulfur Dioxide and the Production of Formaldehyde in the Prawn Treated with Sodium Bisulfite. Translated from Japanese: *Bulletin of the Japanese Society of Scientific Fisheries.* 43(1):115-120, 1977. TRANS. No. 24085.
- YANO, I., and Y. OGAWA. Effects of Light, Temperature, and Hydrostatic Pressure on Vertical Distribution of Abalone Larve (*Haliotis Gigantea*). Translated from Japanese: *Bulletin, Tokai Regional Fisheries Research Laboratory.* No. 91, October 1977. TRANS. No. 24089.